

**Montana Board of Oil and Gas Conservation  
Environmental Assessment**

**Operator:** Fidelity Exploration and Production Company

**Well Name/Number:** Fee No. 1544

**Location:** NW NW Section 26 T31N R34E

**County:** Valley, MT; Field (or Wildcat) Bowdoin Dome

**Air Quality**

(possible concerns)

Long drilling time: No, 2 to 3 days drilling time.

Unusually deep drilling (high horsepower rig): No, single derrick drilling rig to drill to 1800' TD.

Possible H2S gas production: None anticipated.

In/near Class I air quality area: No, Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☒ Other: Existing gas gathering pipelines in the area.

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Comments: No special concerns – using small rig to drill to 1800' TD.

**Water Quality**

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater mud system.

High water table: Possible, surface use is flood irrigated fields.

Surface drainage leads to live water: No, closest drainage is Beaver Creek about 1/4 of a mile to the southwest from this location.

Water well contamination: No, closest water wells are about 1/4 of a mile to the northwest, about 1/2 of a mile to the northwest and about 3/4 of a mile to the southeast from this location. These water wells are all less than 100' in depth. This well will drill surface hole with freshwater drilling fluids and set 150' of steel surface casing and cement back to surface.

Porous/permeable soils: No, sandy silty clay soils.

Class I stream drainage: No Class I stream drainage.

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: \_\_\_\_\_

Comments: 150' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used. Production casing will be cemented to surface if well is productive.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: None anticipated.

High erosion potential: No, no cut, up to 0.0' and no fill, up to 0.0', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 120'X190' location size required.

Damage to improvements: Slight, surface use is cultivated field.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☒ Other Require DEQ General Permit for Storm Water Discharge Associated

with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county gravel road, Larb Creek Road and existing farm trail. A short access will be built off an existing section line trail, about 1 1/4 of a miles into this location. Cuttings and mud solids will be buried in the unlined pits. Drilling fluids will be hauled to a nearby stock pond with surface owner approval and/or allowed to dry in the pits. Pits will be backfilled when dry. No special concerns

## Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Buildings about 7/8 of a mile to the southwest from this location. The town of Beaverton, MT is about 1 mile to the east northeast from this location.

Possibility of H<sub>2</sub>S: None anticipated.

Size of rig/length of drilling time: Small drilling rig/short 2 to 3 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H<sub>2</sub>S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: Adequate surface casing and operational BOP should mitigate any problems. No concerns.

## Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Listed threatened or endangered species for Valley County are Pallid Sturgeon, Piping Plover, Black Footed Ferret, Interior Least tern

and Whooping Crane. Proposed species is the Mountain Plover. Species of concern is the Greater Sage Grouse.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: \_\_\_\_\_

Comments: Private cultivated surface lands. No concerns

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### **Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites: None identified

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: \_\_\_\_\_

Comments: On private cultivated surface lands. No concerns.

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### **Social/Economic**

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: No concerns Development well within an existing gas field, Bowdoin Dome Gas Field.

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### **Remarks or Special Concerns for this site**

Well is an 1800' Mowry Formation development well.

### **Summary: Evaluation of Impacts and Cumulative effects**

Short term impacts expected, no long term impacts anticipated.

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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title:) Chief Field Inspector

Date: August 9, 2010

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center

(Name and Agency)

Water wells in Valley County

(subject discussed)

August 9, 2010

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Valley County

(subject discussed)

August 9, 2010

(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_